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NEWS 2	OCT 02	CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 3	OCT 19	BEILSTEIN updated with new compounds
NEWS 4	NOV 15	Derwent Indian patent publication number format enhanced
NEWS 5	NOV 19	WPIX enhanced with XML display format
NEWS 6	NOV 30	ICSD reloaded with enhancements
NEWS 7	DEC 04	LINPADOCDB now available on STN
NEWS 8	DEC 14	BEILSTEIN pricing structure to change
NEWS 9	DEC 17	USPATOLD added to additional database clusters
NEWS 10	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS 11	DEC 17	DGENE now includes more than 10 million sequences
NEWS 12	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 13	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 14	DEC 17	CA/CAplus enhanced with new custom IPC display formats
NEWS 15	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 16	JAN 02	STN pricing information for 2008 now available
NEWS 17	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS 18	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS 19	JAN 28	MARPAT searching enhanced
NEWS 20	JAN 28	USGENE now provides USPTO sequence data within 3 days of publication
NEWS 21	JAN 28	TOXCENTER enhanced with reloaded MEDLINE segment
NEWS 22	JAN 28	MEDLINE and LMEDLINE reloaded with enhancements
NEWS 23	FEB 08	STN Express, Version 8.3, now available
NEWS 24	FEB 20	PCI now available as a replacement to DPCI
NEWS 25	FEB 25	IFIREF reloaded with enhancements
NEWS 26	FEB 25	IMSPRODUCT reloaded with enhancements
NEWS 27	FEB 29	WPINDEX/WPIDS/WPIX enhanced with ECLA and current U.S. National Patent Classification

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

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FILE 'USPATFULL' ENTERED AT 15:39:47 ON 24 MAR 2008
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FILE 'USPAT2' ENTERED AT 15:39:47 ON 24 MAR 2008
CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

=> s (carboxylic (w) acid (w) ester) (L) (fat? or oil?) lipase
MISSING OPERATOR OIL?) LIPASE
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s (carboxylic (w) acid (w) ester) (L) (fat? or oil?) (L) lipase
  13 FILES SEARCHED...
  24 FILES SEARCHED...
L1          806 (CARBOXYLIC (W) ACID (W) ESTER) (L) (FAT? OR OIL?) (L) LIPASE

=> s l1 and biodiesel
L2            5 L1 AND BIODIESEL

=> d l2 1-5 ibib abs

L2   ANSWER 1 OF 5  USPATFULL on STN
ACCESSION NUMBER:       2007:181291  USPATFULL
TITLE:                  Simultaneous synthesis and purification of a fatty acid
                        monoester biodiesel fuel
INVENTOR(S):            Geier, Doug, Decatur, IL, UNITED STATES
                        Soper, John G., Mt. Zion, IL, UNITED STATES

                             NUMBER       KIND    DATE
                        ---------------- ------ --------
PATENT INFORMATION:     US 2007158270      A1   20070712
APPLICATION INFO.:      US 2006-449199     A1   20060608  (11)

                             NUMBER         DATE
                        ------------------ --------
PRIORITY INFORMATION:   US 2006-758080P    20060111 (60)
DOCUMENT TYPE:          Utility
FILE SEGMENT:           APPLICATION
LEGAL REPRESENTATIVE:   BUCHANAN INGERSOLL PC, (ARCHER DANIELS MIDLAND
                        COMPANY), 301 GRANT STREET, 20TH FLOOR, PITTSBURGH, PA,
                        15219, US
NUMBER OF CLAIMS:       36
EXEMPLARY CLAIM:        1
NUMBER OF DRAWINGS:     13 Drawing Page(s)
LINE COUNT:             2096
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      Simultaneous synthesis and purification of a fatty acid monoester
        biodiesel fuel from a triacylglycerol feedstock is described. In
        an exemplary method, the triacylglycerol feedstock is continuously
        contacted with a catalytic chromatographic bed comprising a first (solid
        phase) basic catalyst through a first port of a simulated moving bed
        chromatographic apparatus. A monohydric alcohol and optional second
        (mobile phase) basic catalyst is continuously contacted with the
        catalytic chromatographic bed through a second port and pumped in a
        first direction toward the triacylglycerol feedstock to contact the
        triacylglycerol in a reaction zone of the catalytic chromatographic bed
        where the fatty acid monoester and glycerol coproduct are formed. The
        fatty acid monoester is removed from the reaction zone through a product
        port of the simulated moving bed apparatus. Segments of the catalytic
        chromatographic bed are incrementally moved in a second direction,
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opposite the first direction, and the glycerol is removed from a raffinate port located opposite the product port of the apparatus.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 2 OF 5 USPATFULL on STN

ACCESSION NUMBER: 2007:136231 USPATFULL

TITLE: Process for the production of fine chemicals

INVENTOR(S): Puzio, Piotr, Berlin, GERMANY, FEDERAL REPUBLIC OF
Wendel, Birgit, Berlin, GERMANY, FEDERAL REPUBLIC OF
Herold, Michael Manfred, Berlin, GERMANY, FEDERAL REPUBLIC OF
Looser, Ralf, Berlin, GERMANY, FEDERAL REPUBLIC OF
Blau, Astrid, Stahnsdorf, GERMANY, FEDERAL REPUBLIC OF
Plesch, Gunnar, Potsdam, GERMANY, FEDERAL REPUBLIC OF
Kamlage, Beate, Berlin, GERMANY, FEDERAL REPUBLIC OF
Schauwecker, Florian, Berlin, GERMANY, FEDERAL REPUBLIC OF

PATENT ASSIGNEE(S): Metanomics GmbH, Berlin, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2007118916	A1	20070524	
APPLICATION INFO.:	US 2006-516230	A1	20060906	(11)

	NUMBER	DATE
PRIORITY INFORMATION:	EP 2006-110426	20060224
	EP 2006-110579	20060228
	EP 2006-110425	20060224
	EP 2006-110423	20060224
	EP 2006-110418	20060224
	EP 2006-110383	20060224
	EP 2006-110378	20060224
	EP 2006-110367	20060224
	EP 2006-110327	20060223
	EP 2006-110325	20060223
	EP 2006-110959	20060224
	EP 2006-110289	20060222
	EP 2006-110005	20060216
	EP 2006-110215	20060221
	EP 2006-110211	20060214
	EP 2006-110968	20060217
	EP 2006-101589	20060207
	EP 2005-113027	20051222
	EP 2005-112431	20051215
	EP 2005-112039	20051212
	EP 2005-111910	20051201
	EP 2005-111170	20051117
	EP 2005-110441	20051108
	EP 2005-110433	20051107
	EP 2005-109592	20051014

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Connolly Bove Lodge & Hutz LLP, 1007 North Orange Street, P.O. Box 2207, Wilmington, DE, 19899, US

NUMBER OF CLAIMS: 34
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 80479
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a process for the production of the fine chemical in a microorganism, a plant cell, a plant, a plant tissue or in one or more parts thereof, preferably in plastids. The invention furthermore relates to nucleic acid molecules, polypeptides, nucleic acid constructs, vectors, antibodies, host cells, plant tissue, propagation material, harvested material, plants, microorganisms as well as agricultural compositions and to their use.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 3 OF 5 USPATFULL on STN
ACCESSION NUMBER: 2006:301628 USPATFULL
TITLE: Synthetical method of biodiesek from oils and fats
INVENTOR(S): Du, Wei, Beijing, CHINA
Xu, Yuanyuan, Qinghuayuan, CHINA
Liu, Dehua, Qinghuayuan, CHINA

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2006257986	A1	20061116	
APPLICATION INFO.:	US 2004-549336	A1	20040115	(10)
	WO 2004-CN51		20040115	
			20060620	PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	CN 2003-119600	20030313

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MCKEE, VOORHEES & SEASE, P.L.C., 801 GRAND AVENUE, SUITE 3200, DES MOINES, IA, 50309-2721, US
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 1 Drawing Page(s)
LINE COUNT: 398
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides a process for synthesizing biodiesel from renewable oils, comprising: carrying out a transesterification reaction, in the presence of an enzyme catalyst, between a low carbon fatty acid ester RCOOR' as an acyl acceptor and a renewable oil, wherein the molar ratio of the low carbon fatty acid ester to the renewable oil is in the range of from 3:1 to 20:1, the transesterification reaction producing a glycerine tri-(low carbon) carboxylic ester by-product, and reacting the glycerine tri-(low carbon) carboxylic ester by-product with a low carbon alcohol R'OH to obtain the low carbon fatty acid ester, wherein the low carbon fatty acid ester is capable of being recycled in a further round of biodiesel synthesis, wherein R and R' are independently selected from the group consisting of alkyls with one to four carbon atoms.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 4 OF 5 USPATFULL on STN
ACCESSION NUMBER: 2006:111938 USPATFULL
TITLE: Process for producing biodiesel and the product thereof
INVENTOR(S): Sharma, Meeta, Haryana, INDIA
Kumar, Ravindra, Haryana, INDIA
Ray, Sinha Sabyasachi, Haryana, INDIA
Sarin, Rakesh, Haryana, INDIA
Malhotra, Ravinder Kumar, Haryana, INDIA
Verma, Ram Prakash, Haryana, INDIA
Raghunath, Niranjan Raje, Haryana, INDIA

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006094890	A1	20060504
APPLICATION INFO.:	US 2005-77162	A1	20050311 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	IN 2004-11552004	20041028

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: NEIFELD IP LAW, PC, 4813-B EISENHOWER AVENUE, ALEXANDRIA, VA, 22304, US
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
LINE COUNT: 565
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed herein is a single pot process for producing biodiesel and the product thereof, using non-edible oil sources containing free fatty acid. The process comprises esterification and transesterification of non-edible vegetable oil sources containing free fatty acids in a single pot employing a water scavenger or a water adsorbent or a mixture thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 5 OF 5 USPATFULL on STN
ACCESSION NUMBER: 2005:202699 USPATFULL
TITLE: Esterases with lipase activity
INVENTOR(S): Oakeshott, John Graham, Wanniassa, AUSTRALIA
Devonshire, Alan, Harpenden, UNITED KINGDOM
Coppin, Christopher Wayne, Ngunnawal, AUSTRALIA
Heidari, Rama, Aharoo, AUSTRALIA
Dorrian, Susan Jane, Fraser, AUSTRALIA
Russell, Robyn Joyce, Wanniassa, AUSTRALIA

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005176118	A1	20050811
APPLICATION INFO.:	US 2003-503691	A1	20020206 (10)
	WO 2002-AU113		20020206

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: GREENLEE WINNER AND SULLIVAN P C, 4875 PEARL EAST CIRCLE, SUITE 200, BOULDER, CO, 80301, US
NUMBER OF CLAIMS: 47

```
EXEMPLARY CLAIM:        1
NUMBER OF DRAWINGS:     6 Drawing Page(s)
LINE COUNT:             2436
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      The present invention relates to the use of insect esterases or lipases,
        or mutants thereof, as catalysts in biotransformation processes. The
        present invention may have application in any process involving
        hydrolysis, esterification, transesterification, interesterification or
        acylation reactions. The invention also has application in the enzymatic
        resolution of compounds to produce optically active compounds and has
        particular, but not exclusive, application to substrates having a
        hydrophobic moiety such as pyrethroids and fatty acid esters.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.


=> d his

     (FILE 'HOME' ENTERED AT 15:39:30 ON 24 MAR 2008)

     FILE '1MOBILITY, 2MOBILITY, ABI-INFORM, CAPLUS, CBNB, CIN, COMPENDEX,
     CONFSCI, DISSABS, DKF, ENCOMPLIT, ENCOMPPAT, ENERGY, GEOREF, IFIPAT,
     INSPEC, INSPHYS, NLDB, NTIS, PASCAL, PROMT, SCISEARCH, TULSA, TULSA2,
     USPATFULL, USPAT2' ENTERED AT 15:39:47 ON 24 MAR 2008
L1          806 S (CARBOXYLIC (W) ACID (W) ESTER) (L) (FAT? OR OIL?) (L) LIPASE
L2            5 S L1 AND BIODIESEL

=> s l1 and transesterification
L3           93 L1 AND TRANSESTERIFICATION

=> s l3 and acetate
L4           77 L3 AND ACETATE

=> s l4 and candida
L5           26 L4 AND CANDIDA

=> d l5 1-10 ibib abs

L5   ANSWER 1 OF 26  USPATFULL on STN
ACCESSION NUMBER:       2007:308638  USPATFULL
TITLE:                  Resin particle liquid dispersion for electrostatic
                        image developing toner, production process of the
                        liquid dispersion, electrostatic image developing
                        toner, production process of the toner, electrostatic
                        image developer and image forming method
INVENTOR(S):            Matsumura, Yasuo, Kanagawa, JAPAN
                        Matsuoka, Hirotaka, Kanagawa, JAPAN
                        Maehata, Hideo, Kanagawa, JAPAN
                        Hiraoka, Satoshi, Kanagawa, JAPAN
                        Sasaki, Yuki, Kanagawa, JAPAN
                        Mera, Fumiaki, Kanagawa, JAPAN
PATENT ASSIGNEE(S):     FUJI XEROX CO., LTD., TOKYO, JAPAN (non-U.S.
                        corporation)

                             NUMBER       KIND    DATE
                        ---------------- ------ --------
PATENT INFORMATION:     US 2007269732      A1   20071122
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APPLICATION INFO.: US 2006-592301 A1 20061103 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2006-141051	20060522

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: OLIFF & BERRIDGE, PLC, P.O. BOX 19928, ALEXANDRIA, VA, 22320, US
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
LINE COUNT: 2070
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A resin particle liquid dispersion for an electrostatic image developing toner includes: a polycondensable resin obtained by polycondensing at least one selected from the group consisting of a polycondensable monomer, an oligomer of the polycondensable monomer and a prepolymer of the polycondensable monomer, wherein the resin particle liquid dispersion further comprises a compound having a solubility parameter of 8 or less.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 2 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2007:278048 USPATFULL
TITLE: Electrostatic image developing toner, electrostatic image developer, image forming method, image forming apparatus and printed matter
INVENTOR(S): Maeyama, Ryuichro, Kanagawa, JAPAN
PATENT ASSIGNEE(S): FUJI XEROX CO., LTD., TOKYO, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2007243478	A1	20071018
APPLICATION INFO.:	US 2006-594162	A1	20061108 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2006-114493	20060418

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: OLIFF & BERRIDGE, PLC, P.O. BOX 19928, ALEXANDRIA, VA, 22320, US
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
LINE COUNT: 1869
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An electrostatic image developing toner comprising an amide ester represented by formula (1):

##STR1##

wherein R.sup.1CO-- and R.sup.2CO-- each independently represents a saturated or unsaturated acyl group having a carbon number of 16 to 24, which may have a hydroxyl group; R.sup.3 represents a linear or branched alkyl group having a carbon number of 1 to 3; and R.sup.4 represents a

linear or branched alkylene group having a carbon number of 1 to 6 or a linear or branched alkenylene group having a carbon number of 2 to 6.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 3 OF 26 USPATFULL on STN

ACCESSION NUMBER: 2007:136231 USPATFULL

TITLE: Process for the production of fine chemicals

INVENTOR(S): Puzio, Piotr, Berlin, GERMANY, FEDERAL REPUBLIC OF
Wendel, Birgit, Berlin, GERMANY, FEDERAL REPUBLIC OF
Herold, Michael Manfred, Berlin, GERMANY, FEDERAL REPUBLIC OF
Looser, Ralf, Berlin, GERMANY, FEDERAL REPUBLIC OF
Blau, Astrid, Stahnsdorf, GERMANY, FEDERAL REPUBLIC OF
Plesch, Gunnar, Potsdam, GERMANY, FEDERAL REPUBLIC OF
Kamlage, Beate, Berlin, GERMANY, FEDERAL REPUBLIC OF
Schauwecker, Florian, Berlin, GERMANY, FEDERAL REPUBLIC OF

PATENT ASSIGNEE(S): Metanomics GmbH, Berlin, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2007118916	A1	20070524	
APPLICATION INFO.:	US 2006-516230	A1	20060906	(11)

	NUMBER	DATE
PRIORITY INFORMATION:	EP 2006-110426	20060224
	EP 2006-110579	20060228
	EP 2006-110425	20060224
	EP 2006-110423	20060224
	EP 2006-110418	20060224
	EP 2006-110383	20060224
	EP 2006-110378	20060224
	EP 2006-110367	20060224
	EP 2006-110327	20060223
	EP 2006-110325	20060223
	EP 2006-110959	20060224
	EP 2006-110289	20060222
	EP 2006-110005	20060216
	EP 2006-110215	20060221
	EP 2006-110211	20060214
	EP 2006-110968	20060217
	EP 2006-101589	20060207
	EP 2005-113027	20051222
	EP 2005-112431	20051215
	EP 2005-112039	20051212
	EP 2005-111910	20051201
	EP 2005-111170	20051117
	EP 2005-110441	20051108
	EP 2005-110433	20051107
	EP 2005-109592	20051014

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Connolly Bove Lodge & Hutz LLP, 1007 North Orange Street, P.O. Box 2207, Wilmington, DE, 19899, US

NUMBER OF CLAIMS: 34
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 80479
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a process for the production of the fine chemical in a microorganism, a plant cell, a plant, a plant tissue or in one or more parts thereof, preferably in plastids. The invention furthermore relates to nucleic acid molecules, polypeptides, nucleic acid constructs, vectors, antibodies, host cells, plant tissue, propagation material, harvested material, plants, microorganisms as well as agricultural compositions and to their use.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 4 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2007:23509 USPATFULL
TITLE: Resin particle liquid dispersion for electrostatic image developing toner, electrostatic image developing toner, production method thereof, developer and image forming method
INVENTOR(S): Sasaki, Yuki, Kanagawa, JAPAN
Hiraoka, Satoshi, Kanagawa, JAPAN
Mera, Fumiaki, Kanagawa, JAPAN
Matsuoka, Hirotaka, Kanagawa, JAPAN
Matsumura, Yasuo, Kanagawa, JAPAN
PATENT ASSIGNEE(S): FUJI XEROX CO., LTD., Tokyo, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2007020551	A1	20070125
APPLICATION INFO.:	US 2005-311277	A1	20051220 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2005-209848	20050720

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: OLIFF & BERRIDGE, PLC, P.O. BOX 19928, ALEXANDRIA, VA, 22320, US
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
LINE COUNT: 2516
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A resin particle liquid dispersion for an electrostatic image developing toner, comprising: an aqueous medium; and a resin particle dispersed in the aqueous medium to have a median diameter of 0.05 to 2.0 μm, the resin particle comprising a polycondensable polymer obtained by polycondensing polycondensable monomers, wherein a storage modulus GL(30) of the resin particle at 30° C. is 1+10.sup.7 Pa or more, and a melting point of the polycondensable polymer is from 45 to 110° C.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 26 USPATFULL on STN

ACCESSION NUMBER: 2007:12217 USPATFULL
TITLE: Antioxidant-functionalized polymers
INVENTOR(S): Kaplan, David L., Concord, MA, UNITED STATES
Singh, Amarjit, Medford, MA, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2007010632	A1	20070111	
APPLICATION INFO.:	US 2003-536810	A1	20031126	(10)
	WO 2003-US37775		20031126	
			20060919	PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-429697P	20021127 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: NUTTER MCCLENNEN & FISH LLP, WORLD TRADE CENTER WEST, 155 SEAPORT BOULEVARD, BOSTON, MA, 02210-2604, US
NUMBER OF CLAIMS: 52
EXEMPLARY CLAIM: 1-118
NUMBER OF DRAWINGS: 13 Drawing Page(s)
LINE COUNT: 1908
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods and compositions are disclosed for the preparation of free radical scavenging polymers and polymer films functionalized with antioxidants. Enzymatic and chemical tailoring of monomers with antioxidants followed by enzymatic polymerization is described. These antioxidant functionalized polymers can increase shelf life and quality of food products, as well as, increase effectiveness of pharmaceutical agents when used as packaging or as coatings on packaging for oxygen sensitive materials. The novel enzymatic covalent coupling of antioxidants to a polymer enhances the free radical scavenging ability of packaging while also inhibiting the escape of the antioxidants, and thus limiting exposure and/or absorption by an individual. In addition to its use in food or pharmaceutical packaging, methods are disclosed for using the antioxidant coupled polymers in a variety of applications including as coatings on the inside of medical devices, such as stents and catheters, which would substantially reduce free radical damage and/or oxygen depletion during medical procedures. Furthermore, through the coupling of antioxidants to biodegradable polymers, controlled delivery and sustained release of an antioxidant to a subject is possible.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2007:8377 USPATFULL
TITLE: Ionic liquid reconstituted cellulose composites as solid support matrices
INVENTOR(S): Rogers, Robin D., Tuscaloosa, AL, UNITED STATES
Daly, Daniel T., Tuscaloosa, AL, UNITED STATES
Turner, Megan B., Tuscaloosa, AL, UNITED STATES
Spear, Scott K., Bankston, AL, UNITED STATES
Holbrey, John D., Tuscaloosa, AL, UNITED STATES

	NUMBER	KIND	DATE

PATENT INFORMATION:	US 2007006774	A1	20070111
APPLICATION INFO.:	US 2006-475630	A1	20060627 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2005-694902P	20050629 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	NEEDLE & ROSENBERG, P.C., SUITE 1000, 999 PEACHTREE STREET, ATLANTA, GA, 30309-3915, US	
NUMBER OF CLAIMS:	77	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	5 Drawing Page(s)	
LINE COUNT:	2898	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are composites comprising regenerated cellulose, a first active substance, a second active substance, and a linker. Methods for preparing the composites that involve the use of ionic liquids are also disclosed. Articles prepared from the disclosed composites and further disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 7 OF 26 USPATFULL on STN

ACCESSION NUMBER:	2006:301628 USPATFULL		
TITLE:	Synthetical method of biodiuesek from oils and fats		
INVENTOR(S):	Du, Wei, Beijing, CHINA Xu, Yuanyuan, Qinghuayuan, CHINA Liu, Dehua, Qinghuayuan, CHINA		
PATENT INFORMATION:	US 2006257986	A1	20061116
APPLICATION INFO.:	US 2004-549336	A1	20040115 (10)
	WO 2004-CN51		20040115 20060620 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	CN 2003-119600	20030313
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MCKEE, VOORHEES & SEASE, P.L.C., 801 GRAND AVENUE, SUITE 3200, DES MOINES, IA, 50309-2721, US	
NUMBER OF CLAIMS:	10	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Page(s)	
LINE COUNT:	398	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides a process for synthesizing biodiesel from renewable oils, comprising: carrying out a transesterification reaction, in the presence of an enzyme catalyst, between a low carbon fatty acid ester RCOOR' as an acyl acceptor and a renewable oil, wherein the molar ratio of the low carbon fatty acid ester to the renewable oil is in the range of from 3:1 to 20:1, the transesterification reaction producing a glycerine tri-(low carbon) carboxylic ester

by-product, and reacting the glycerine tri-(low carbon) carboxylic ester by-product with a low carbon alcohol R'OH to obtain the low carbon fatty acid ester, wherein the low carbon fatty acid ester is capable of being recycled in a further round of biodiesel synthesis, wherein R and R' are independently selected from the group consisting of alkyls with one to four carbon atoms.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 8 OF 26 USPATFULL on STN

ACCESSION NUMBER:	2006:254174 USPATFULL
TITLE:	Toner for developing electrostatic latent images and manufacturing method thereof, developer for developing electrostatic latent images, image forming method, and method for manufacturing dispersion of resin particles
INVENTOR(S):	Maehata, Hideo, Minamiashigara-shi, JAPAN Yamamoto, Yasuo, Minamiashigara-shi, JAPAN Hiraoka, Satoshi, Minamiashigara-shi, JAPAN Matsumura, Yasuo, Minamiashigara-shi, JAPAN Matsuoka, Hirotaka, Minamiashigara-shi, JAPAN Sasaki, Yuki, Minamiashigara-shi, JAPAN Mera, Fumiaki, Minamiashigara-shi, JAPAN
PATENT ASSIGNEE(S):	FUJI XEROX CO., LTD., Tokyo, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2006216625	A1	20060928	
APPLICATION INFO.:	US 2005-221798	A1	20050909	(11)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2005-90274	20050325
	JP 2005-93332	20050328

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	OLIFF & BERRIDGE, PLC, P.O. BOX 19928, ALEXANDRIA, VA, 22320, US
NUMBER OF CLAIMS:	26
EXEMPLARY CLAIM:	1
LINE COUNT:	3349

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a toner for developing electrostatic latent images, including resin particles containing a crystalline polymer and an amorphous polymer, wherein the amorphous polymer and the crystalline polymer satisfy the relationship represented by the following formula (1), and a method for manufacturing the toner of the invention. The present invention also provides a developer for electrostatic latent images including the toner of the invention and a carrier; and an image forming method using the toner of the invention. Further the invention provides a method for manufacturing a dispersion of resin particles. δa-δc≧1.05[(cal/ml).sup.1/2(25. degree. C.)] Formula (1) In formula (1), δa represents a solubility parameter of the amorphous polymer, and δc represents a solubility parameter of the crystalline polymer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 9 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2006:53986 USPATFULL
TITLE: Enantioselective biotransformation for preparation of protein tyrosine kinase inhibitor intermediates
INVENTOR(S): Kung, Pei-Pei, San Diego, CA, UNITED STATES
Martinez, Carlos Alberto, Oceanside, CA, UNITED STATES
Tao, Junhua, San Diego, CA, UNITED STATES
PATENT ASSIGNEE(S): AGOURON PHARMACEUTICALS, INC. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006046287	A1	20060302
APPLICATION INFO.:	US 2005-213025	A1	20050826 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2004-605118P	20040826 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: AGOURON PHARMACEUTICALS, INC., 10777 SCIENCE CENTER DRIVE, SAN DIEGO, CA, 92121, US
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
LINE COUNT: 2269
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to biocatalytic methods for preparing enantiomerically pure stereoisomers of 1-(2,6-dichloro-3-fluorophenyl)ethanol. Disclosed are methods of preparation of the desired (S)-enantiomer, which methods are based on a combination of enzymatic resolution, chemical esterification and chemical hydrolysis with inversion of 1-(2,6-dichloro-3-fluorophenyl)ethyl esters or stereoselective bio-reduction of 2,6-dichloro-3-fluoro-acetophenone with a biocatalyst such as an enzyme or a microorganism. The chiral (S)-enantiomer can be used in the synthesis of certain enantiomerically enriched, ether linked 2-aminopyridine compounds that potently inhibit auto-phosphorylation of human heptocyte growth factor receptor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 10 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2006:41440 USPATFULL
TITLE: Methods to manufacture 1,3-dioxolane nucleosides
INVENTOR(S): Sznaidman, Marcos, Durham, NC, UNITED STATES
Painter, George R., Chape Hill, NC, UNITED STATES
Almond, Merrick R., Apex, NC, UNITED STATES
Gleary, Darryl G., Chapel Hill, NC, UNITED STATES
Pesyan, Amir, Salt Lake City, UT, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006036092	A1	20060216
APPLICATION INFO.:	US 2005-51287	A1	20050203 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2004-541545P	20040203 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: KING & SPALDING LLP, 191 PEACHTREE STREET, N.E., 45TH FLOOR, ATLANTA, GA, 30303-1763, US
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Page(s)
LINE COUNT: 2654
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This application provides a process for preparing enantiomerically pure β-D-dioxolane nucleosides. In particular, a new synthesis of (-)-DAPD, suitable for large scale development, is described. In one embodiment the invention provides a process for preparing a substantially pure β-D- or β-L-1,3-dioxolane nucleosides comprising a) preparing or obtaining an esterified 2,2-dialkoxy ethanol; b) cyclizing the esterified 2,2-dialkoxy ethanol with glycolic acid to obtain a 1,3-dioxolane lactone; c) resolving the 1,3-dioxolane lactone to obtain a substantially pure D- or L-lactone; d) selectively reducing and activating the D- or L-chiral lactone to obtain a substantially pure D- or L-1,3-dioxolane; e) coupling the D- or L-1,3-dioxolane to an activated and/or protected purine or pyrimidine base; and f) optionally purifying the nucleoside to obtain a substantially pure protected β-D- or P-L-1,3-dioxolane nucleoside.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d l5 11-18 ibib abs

L5 ANSWER 11 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2006:10038 USPATFULL
TITLE: Production of carboxylic acid and carbonic acid derivatives using a thermostable esterase
INVENTOR(S): Gruning, Burghard, Essen, GERMANY, FEDERAL REPUBLIC OF
Hills, Geoffrey, Essen, GERMANY, FEDERAL REPUBLIC OF
Veit, Thomas, Hagen, GERMANY, FEDERAL REPUBLIC OF
Weitemeyer, Christian, Essen, GERMANY, FEDERAL REPUBLIC OF
Favre-Bulle, Olivier, Nimes, FRANCE
Lefevre, Fabrice, Nimes, FRANCE
Nguyen, Hong-Khanh, Nimes, FRANCE
Ravot, Gilles, Nimes, FRANCE

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20060088887	A1	20060112
APPLICATION INFO.:	US 2004-955053	A1	20040930 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	EP 2003-21973	20030930

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: SCULLY SCOTT MURPHY & PRESSER, PC, 400 GARDEN CITY PLAZA, SUITE 300, GARDEN CITY, NY, 11530, US
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 2 Drawing Page(s)
LINE COUNT: 1274
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to processes for the production of acyl compounds using an esterase having thermostable properties, and to products of such processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 12 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2006:3971 USPATFULL
TITLE: Enzymatic resolution of an alpha-substituted carboxylic acid or an ester thereof by Carica papaya lipase
INVENTOR(S): Tsai, Shau-Wei, Tainan City, TAIWAN, PROVINCE OF CHINA
PATENT ASSIGNEE(S): NATIONAL CHENG KUNG UNIVERSITY (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006003428	A1	20060105
APPLICATION INFO.:	US 2005-168490	A1	20050629 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	TW 2004-93119718	20040630

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: FOLEY AND LARDNER LLP, SUITE 500, 3000 K STREET NW, WASHINGTON, DC, 20007, US
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
LINE COUNT: 1173
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed herein is a process for enzymatically resolving a mixture of R- and S-enantiomers of an α-substituted carboxylic acid or an ester or thioester thereof, in which a Carica papaya lipase is used as a biocatalyst to effect the resolution as desired.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 13 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:202699 USPATFULL
TITLE: Esterases with lipase activity
INVENTOR(S): Oakeshott, John Graham, Wanniassa, AUSTRALIA
Devonshire, Alan, Harpenden, UNITED KINGDOM
Coppin, Christopher Wayne, Ngunnawal, AUSTRALIA
Heidari, Rama, Aharoo, AUSTRALIA
Dorrian, Susan Jane, Fraser, AUSTRALIA
Russell, Robyn Joyce, Wanniassa, AUSTRALIA

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005176118	A1	20050811
APPLICATION INFO.:	US 2003-503691	A1	20020206 (10)
	WO 2002-AU113		20020206

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: GREENLEE WINNER AND SULLIVAN P C, 4875 PEARL EAST

CIRCLE, SUITE 200, BOULDER, CO, 80301, US
NUMBER OF CLAIMS: 47
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 2436
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to the use of insect esterases or lipases, or mutants thereof, as catalysts in biotransformation processes. The present invention may have application in any process involving hydrolysis, esterification, transesterification, interesterification or acylation reactions. The invention also has application in the enzymatic resolution of compounds to produce optically active compounds and has particular, but not exclusive, application to substrates having a hydrophobic moiety such as pyrethroids and fatty acid esters.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 14 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:131184 USPATFULL
TITLE: Thermostable hydrolase
INVENTOR(S): Gruning, Burghard, Essen, GERMANY, FEDERAL REPUBLIC OF
Hills, Geoffrey, Essen, GERMANY, FEDERAL REPUBLIC OF
Veit, Thomas, Hagen, GERMANY, FEDERAL REPUBLIC OF
Weitemeyer, Christian, Essen, GERMANY, FEDERAL REPUBLIC OF
Favre-Bulle, Olivier, Nimes, FRANCE
Lefevre, Fabrice, Nimes, FRANCE
Nguyen, Hong-Khanh, Nimes, FRANCE
Ravot, Gilles, Nimes, FRANCE

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005112644	A1	20050526
APPLICATION INFO.:	US 2004-954826	A1	20040930 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	EP 2003-21972	20030930

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: SCULLY SCOTT MURPHY & PRESSER, PC, 400 GARDEN CITY PLAZA, SUITE 300, GARDEN CITY, NY, 11530, US
NUMBER OF CLAIMS: 26
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 1873
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a newly identified hydrolase from thermophilic microorganisms having thermostable properties, and more specifically, to a novel thermostable hydrolase showing high activity at high temperatures.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 15 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2004:147003 USPATFULL

TITLE: Salicyl alcohol derivatives
INVENTOR(S): Otto, Ralf, Bad Friedrichshall, GERMANY, FEDERAL REPUBLIC OF
Weiss, Albrecht, Langenfeld, GERMANY, FEDERAL REPUBLIC OF
PATENT ASSIGNEE(S): Cognis Deutschland GmbH & Co. KG, Duesseldorf, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6750332	B1	20040615	
	WO 2000068239		20001116	
APPLICATION INFO.:	US 2002-856835		20020226	(9)
	WO 2000-EP3758		20000426	

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1999-19920558	19990505
	DE 1999-19924688	19990528

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Barts, Samuel
ASSISTANT EXAMINER: Henry, Michael C.
LEGAL REPRESENTATIVE: Drach, John E., Ettelman, Aaron R.
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 572
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel salicyl alcohol derivatives having valuable cosmetically and pharmaceutically useful properties, such as prostaglandin synthesis inhibition, corresponding to the formula (I):

R.sup.1--OCH.sub.2--Ph--O--Z--(R.sup.2).sub.n (I),

a method for producing the same and their utilization in cosmetics and pharmacy.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 16 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2000:54149 USPATFULL
TITLE: Method of treatment of cancer as well as method of inhibition of lactation in mammals
INVENTOR(S): Seawright, Alan Andrew, Upper Brookfield, Australia
Oelrichs, Peter Brenchley, St. Lucia, Australia
Ng, Jack Chakmeng, Wishart, Australia
MacLeod, John Keith, Weetangera, Australia
Ward, Annemarie, Palmerston, Australia
Schaeffeler, Lothar, Bonn-Bevel, Germany, Federal Republic of
Carman, Raymond Maurice, Chapel Hill, Australia
PATENT ASSIGNEE(S): The University of Queensland, Australia (non-U.S. corporation)
The Australian National University, Australia (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6057366		20000502	
	WO 9522969		19950831	
APPLICATION INFO.:	US 1997-700447		19970304	(8)
	WO 1995-AU97		19950228	
			19970304	PCT 371 date
			19970304	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	AU 1994-4109	19940228
	AU 1994-5205	19940420

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Goldberg, Jerome D.
LEGAL REPRESENTATIVE: Knobbe, Martens, Olson & Bear, LLP
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Figure(s); 11 Drawing Page(s)
LINE COUNT: 867
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of treating breast or ovarian cancer is disclosed by administering an effective amount of a compound obtained from an avocado plant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 17 OF 26 USPATFULL on STN
ACCESSION NUMBER: 96:65484 USPATFULL
TITLE: Process for enzymatic production of isomerically pure isosorbide-2 and 5-monoesters and their conversion to isosorbide-2 and -5 nitrate
INVENTOR(S): Schneider, Manfred, Wupperal, Germany, Federal Republic of
Seemayer, Robert, Wupperal, Germany, Federal Republic of
PATENT ASSIGNEE(S): Boehringer Mannheim GmbH, Mannheim, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5538891		19960723	
APPLICATION INFO.:	US 1994-191731		19940204	(8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1992-938938, filed on 1 Sep 1992, now abandoned			

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1991-4129093	19910902

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Wityshyn, Michael G.
ASSISTANT EXAMINER: Saucier, S.
LEGAL REPRESENTATIVE: Felfe & Lynch
NUMBER OF CLAIMS: 27
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 2 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 722
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Process for the enzymatic production of isomerically pure compounds having the general formulae I and II ##STR1## in which the substituents R have the meanings stated in the claims, as well as their use for the production of isomerically pure isosorbide-2-nitrate having the formula V and isosorbide-5-nitrate having the formula VI, ##STR2## which are both important as therapeutic agents for coronary diseases.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 18 OF 26 USPATFULL on STN
ACCESSION NUMBER: 96:31732 USPATFULL
TITLE: Esterification of hydrophilic polyols by adsorption onto a solid support and employing a substrate-immiscible solvent
INVENTOR(S): Schneider, Manfred P., Triebelsheider Weg 47, D-5600 Wuppertal 1, Germany, Federal Republic of
Laumen, Kurt E., Steinackerweg 10, D-7806 March 2, Germany, Federal Republic of
Berger, Matthias, Melchiorstr 24, D-5000 Koln 1, Germany, Federal Republic of

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5508182		19960416
APPLICATION INFO.:	US 1994-193670		19940208 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1992-834678, filed on 12 Feb 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-654979, filed on 13 Feb 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Knode, Marian C.
ASSISTANT EXAMINER: Saucier, Sandra
LEGAL REPRESENTATIVE: Flehr, Hohbach, Test, Albritton & Herbert
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Figure(s); 7 Drawing Page(s)
LINE COUNT: 1493
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to methods for the production of amphiphilic products such as esters, sugar-esters, peptide-esters, glycolipids, glycoproteins, lipoproteins, peptides, and phosphates of alcohols, sugars, and nucleosides. The methods promote enzymatically catalyzed reactions between hydrophilic substrates such as glycerol, glucose, amino acids, and nucleosides, and second substrates such as free fatty acids, triglycerides, vinylesters, amino acids, and phosphates. The method is also applied to enzymatic reactions with saccharides and polyalcohols. The hydrophilic substrates are adsorbed to finely divided solid supports such as silica gel, diatomaceous earths, or activated charcoals in order to promote the dispersion of the hydrophilic substrates within hydrophobic substrates and solvents. Hydrophobic solvents such as n-hexane and t-butylmethylether may be included in the reaction mixtures.

Reactions are conducted under non-aqueous conditions in order to promote reverse hydrolysis. Methods are provided for the production of isomerically pure 1,3-diglycerides. Further methods are disclosed for the production and specific precipitation of pure 1-monoglycerides through the use of a reactor/separator system. Enzymes used in the methods include lipases from M. mihei and P. fluorescens, glycosidases such as β-galactosidase, proteases such as chymotrypsin, and acid or alkaline phosphatases. Compositions are provided comprising alcohols, carbohydrates, amino acids, or peptides adsorbed onto solid supports such as silica gel.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d l5 19-26 ibib abs

L5 ANSWER 19 OF 26 USPATFULL on STN
ACCESSION NUMBER: 94:3694 USPATFULL
TITLE: Process for producing epoxyalcohols of high optical purity
INVENTOR(S): Shum, Wilfred P., West Chester, PA, United States
PATENT ASSIGNEE(S): Arco Chemical Technology, L.P., Wilmington, DE, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5278070		19940111
APPLICATION INFO.:	US 1992-863577		19920403 (7)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1990-516001, filed on 26 Apr 1990, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Robinson, Douglas W.
ASSISTANT EXAMINER: Saucier, S.
LEGAL REPRESENTATIVE: Harper, Stephen D.
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
LINE COUNT: 522
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A process for enriching or improving the optical purity of an asymmetric epoxidation reaction mixture is provided wherein the chiral epoxy alcohol enantiomer present in minor amounts is effectively separated from the predominant chiral epoxy alcohol enantiomer. The minor enantiomer is converted to an epoxy ester by stereoselective transesterification using a carboxylic acid derivative such as an enol ester and a lipase enzyme. The desired major chiral epoxy alcohol enantiomer is then recovered or reacted in situ to form a chiral epoxy alcohol derivative.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 20 OF 26 USPATFULL on STN
ACCESSION NUMBER: 93:108998 USPATFULL
TITLE: Thermally stable and positionally non-specific lipase isolated from Candida
INVENTOR(S): Ishii, Michiyo, Sapporo, Japan
PATENT ASSIGNEE(S): Noro Nordisk A/S, Bagsvaerd, Denmark (non-U.S.

corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5273898		19931228
APPLICATION INFO.:	US 1992-962621		19921016 (7)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1988-206344, filed on 21 Jul 1988, now abandoned		

	NUMBER	DATE
PRIORITY INFORMATION:	DK 1986-4966	19861017
	DK 1987-5072	19870928

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Naff, David M.
ASSISTANT EXAMINER: Meller, Michael V.
LEGAL REPRESENTATIVE: Zelson, Steve T., Lambiris, Elias J.
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 1613
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Thermally stable, positionally non-specific lipases native to Candida species of C. antartica, C. tsukubaensis, C. auriculariae, C. humicola, and C. foliarum, are isolated. The lipase of C. antarctica, is preferred. Two lipase activities are elaborated by C. antarctica. One lipase fraction being 43 kD in molecular weight, and of an isoelectric point of about 8.0 and has excellent thermostability. The other fraction being 33 kD in molecular weight and of an isoelectric point of about 6.0 and has high retention of residual activity at pH 10.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 21 OF 26 USPATFULL on STN
ACCESSION NUMBER: 93:48391 USPATFULL
TITLE: Method for preparing optically-active amino acid derivatives
INVENTOR(S): Sih, Charles J., Madison, WI, United States
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, Madison, WI, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5219731		19930615
APPLICATION INFO.:	US 1991-786731		19911101 (7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Wityshyn, Michael G.
ASSISTANT EXAMINER: Gitomer, Ralph
LEGAL REPRESENTATIVE: Olson & Hierl, Ltd.
NUMBER OF CLAIMS: 37
EXEMPLARY CLAIM: 1
LINE COUNT: 890
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a method for enzymatically producing directly optically-active amino acid derivatives in high optical purity from

oxazolone precursors. Thus, such a precursor is subjected to the presence of a catalytically effective amount of a selected enzyme in a mutual solvent. The cyclic precursor is enantioselectively cleaved by hydrolysis. Subsequently, the desired optically-active amino acid derivative is recovered. A preferred cyclic precursor is a 5(4H)-oxazolone compound and a preferred enzyme is a lipase. Either aqueous or organic solvent media can be used.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 22 OF 26 USPATFULL on STN
ACCESSION NUMBER: 93:25044 USPATFULL
TITLE: Compounds useful in enzymatic resolution systems and their preparation
INVENTOR(S): Zepp, Charles M., Berlin, MA, United States
Wald, Stephen A., Wayland, MA, United States
Dodds, David R., Millis, MA, United States
PATENT ASSIGNEE(S): Sepracor, Inc., Marlborough, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5198568		19930330
APPLICATION INFO.:	US 1991-756950		19910909 (7)
RELATED APPLN. INFO.:	Division of Ser. No. US 1988-178735, filed on 7 Apr 1988, now abandoned		

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Killos, Paul J.
LEGAL REPRESENTATIVE: Pennie & Edmonds
NUMBER OF CLAIMS: 101
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Figure(s); 13 Drawing Page(s)
LINE COUNT: 3911
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to novel compositions of matter which are esters with enhanced water solubility, for use in aqueous enzymatic resolution reactions of racemic mixtures of these esters for producing the separate chiral isomers of the racemic mixture. The invention also relates to novel methods for preparing these esters. The importance of the production of the separate chiral isomers of the racemic mixtures resides in the isolation of the isomers which frequently have different biological activities. Of particular significance regarding the water soluble esters of this invention is that they are derivatized with groups which enhance their aqueous solubility and their reactivity with enzymatic resolving methods which are mediated in an aqueous environment.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 23 OF 26 USPATFULL on STN
ACCESSION NUMBER: 93:22852 USPATFULL
TITLE: Compounds useful in enzymatic resolution systems and their preparation
INVENTOR(S): Zepp, Charles M., Berlin, MA, United States
Wald, Stephen A., Wayland, MA, United States
Dodds, David R., Millis, MA, United States

PATENT ASSIGNEE(S): Sepracor, Inc., Marlborough, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5196568		19930323
APPLICATION INFO.:	US 1988-178735		19880407 (7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Killos, Paul J.
LEGAL REPRESENTATIVE: Pennie & Edmonds
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Figure(s); 13 Drawing Page(s)
LINE COUNT: 3685
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to novel compositions of matter which are esters with enhanced water solubility, for use in aqueous enzymatic resolution reactions of racemic mixtures of these esters for producing the separate chiral isomers of the racemic mixture. The invention also relates to novel methods for preparing these esters. The importance of the production of the separate chiral isomers of the racemic mixtures resides in the isolation of the isomers which frequently have different biological activities. Of particular significance regarding the water soluble esters of this invention is that they are derivatized with groups which enhance their aqueous solubility and their reactivity with enzymatic resolving methods which are mediated in an aqueous environment. In addition, the importance of these compounds resides in their being useful in novel methods for facilitating the enzymatic resolution reactions of racemic mixtures of esters, which are derivatized with groups which enhance the esters' aqueous solubility, in 1) a homogeneous aqueous reaction system where an extractive phase is not present, 2) a multiphase dispersion extractive reaction where an extractive phase is present, and 3) an extractive membrane reactor where the enzyme is placed alternatively either (a) in the aqueous phase, (b) in association with the membrane, or (c) in the aqueous phase and in association with the membrane, wherein the aqueous ester phase is contacted with one side of the membrane, and where an organic extractive phase is contacted with the other side of the membrane, wherein the extractive phase serves to remove the resolving reaction product.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 24 OF 26 USPATFULL on STN
ACCESSION NUMBER: 91:106269 USPATFULL
TITLE: Method for membrane reactor resolution of stereoisomers
INVENTOR(S): Matson, Stephen L., Harvard, MA, United States
Wald, Stephen A., Wayland, MA, United States
Zepp, Charles M., Berlin, MA, United States
Dodds, David R., Millis, MA, United States
PATENT ASSIGNEE(S): Sepracor, Inc., Marlborough, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5077217		19911231
APPLICATION INFO.:	US 1988-178743		19880407 (7)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1987-33962, filed on 1 Apr 1987, now patented, Pat. No. US 4800162
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Rosen, Sam
LEGAL REPRESENTATIVE: Pennie & Edmonds
NUMBER OF CLAIMS: 151
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Figure(s); 12 Drawing Page(s)
LINE COUNT: 3025
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to novel methods for facilitating the enzymatic resolution of racemic mixtures of esters, which are derivatized with groups which enhance the esters' aqueous solubility, in an extractive member reactor where the enzyme is placed alternatively either (1) in the aqueous phase, (2) in association with the membrane, or (3) in the aqueous phase and in association with the membrane, wherein the aqueous ester phase is contacted with one side of the membrane, and where an organic extractive phase is contacted with the other side of the membrane, wherein the extractive phase serves to remove the resolving reaction product. Of particular significance regarding this invention is its use of water soluble esters that are derivatized with groups which enhance their aqueous solubility and their reactivity with enzymatic resolving methods which are mediated in an aqueous environment. Novel methods were utilized to prepare these esters, for use in this invention's methods for enzymatically resolving the racemic mixtures of the esters, to produce the separate chiral isomers of the racemic mixture. The importance of the resolution of the separate chiral isomers of the racemic mixtures resides in the isolation of the isomers which frequently have different biological activities.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 25 OF 26 USPATFULL on STN
ACCESSION NUMBER: 91:84371 USPATFULL
TITLE: Method for resolution of stereoisomers
INVENTOR(S): Wald, Stephen A., Wayland, MA, United States
Matson, Stephen L., Harvard, MA, United States
Zepp, Charles M., Berlin, MA, United States
Dodds, David R., Millis, MA, United States
PATENT ASSIGNEE(S): Sepracor, Inc., Marlborough, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5057427		19911015
APPLICATION INFO.:	US 1988-178950		19880407 (7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Rosen, Sam
LEGAL REPRESENTATIVE: Pennie & Edmonds
NUMBER OF CLAIMS: 70
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 3118
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to a novel method of effecting aqueous enzymatic

and homogeneous resolutions of racemic esters which exhibit enhanced aqueous solubility. The preferred embodiment of this invention relates to the resolutions which are effected by placing the enzyme and racemic esters in an aqueous phase wherein one of the ester enantiomers is preferentially and stereospecifically de-esterified to effect the resolution of the initial racemic mixture. In another embodiment of this invention, the resolutions are effected by placing the enzyme and racemic esters in an aqueous phase, and contacting this aqueous phase with an organic phase. The preferential and stereospecific de-esterification of one of the ester enantiomers is effected, and the chiral acid product of the de-esterification reaction is extracted into the organic phase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 26 OF 26 USPATFULL on STN

ACCESSION NUMBER:	89:6006 USPATFULL
TITLE:	Method for resolution of steroisomers in multiphase and extractive membrane reactors
INVENTOR(S):	Matson, Stephen L., Harvard, MA, United States
PATENT ASSIGNEE(S):	Sepracor, Inc., Marlborough, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4800162		19890124
APPLICATION INFO.:	US 1987-33962		19870401 (7)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Rosen, Sam
LEGAL REPRESENTATIVE:	Pennie & Edmonds
NUMBER OF CLAIMS:	157
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	16 Drawing Figure(s); 16 Drawing Page(s)
LINE COUNT:	2884

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to the resolution of racemic mixtures of optically active compounds, including but not limited to the stereochemical purification of chiral organic esters, amides, carboxylic acids, alcohols, and amines. Novel methods utilizing multiphase and extractive enzyme membrane bioreactors are disclosed that selectively produce pure or substantially purified optically active compounds from achiral precursors or mixtures of isomers in which one or several of those isomers are biologically inactive or otherwise lack desirable characteristics. There are immiscible solvents on either side of the membrane.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his

(FILE 'HOME' ENTERED AT 15:39:30 ON 24 MAR 2008)

FILE '1MOBILITY, 2MOBILITY, ABI-INFORM, CAPLUS, CBNB, CIN, COMPENDEX, CONFSCI, DISSABS, DKF, ENCOMPLIT, ENCOMPPAT, ENERGY, GEOREF, IFIPAT, INSPEC, INSPHYS, NLDB, NTIS, PASCAL, PROMT, SCISEARCH, TULSA, TULSA2,

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     USPATFULL, USPAT2' ENTERED AT 15:39:47 ON 24 MAR 2008
L1          806 S (CARBOXYLIC (W) ACID (W) ESTER) (L) (FAT? OR OIL?) (L) LIPASE
L2            5 S L1 AND BIODIESEL
L3           93 S L1 AND TRANSESTERIFICATION
L4           77 S L3 AND ACETATE
L5           26 S L4 AND CANDIDA

=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   140.28     140.49

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=> s biodiesel same candida
          3909 BIODIESEL
           102 BIODIESELS
          3918 BIODIESEL
                 (BIODIESEL OR BIODIESELS)
       1622389 SAME
            72 SAMES
       1622455 SAME
                 (SAME OR SAMES)
         44007 CANDIDA
            29 CANDIDAS
         44017 CANDIDA
                 (CANDIDA OR CANDIDAS)
L6           0 BIODIESEL SAME CANDIDA
                 (BIODIESEL(W)SAME(W)CANDIDA)

=> s biodiesel same rhizomucor
          3909 BIODIESEL
           102 BIODIESELS
          3918 BIODIESEL
                 (BIODIESEL OR BIODIESELS)
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       1622389 SAME
            72 SAMES
       1622455 SAME
                  (SAME OR SAMES)
          1283 RHIZOMUCOR
L7           0 BIODIESEL SAME RHIZOMUCOR
                  (BIODIESEL(W)SAME(W)RHIZOMUCOR)

=> s transesterification same (candida or rhizomucor)
MISSING OPERATOR 'SAME (CANDIDA'
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s transesterifi? (l) ((candida adj antarctica) or rhizomucor)
         23554 TRANSESTERIFI?
         44007 CANDIDA
            29 CANDIDAS
         44017 CANDIDA
                  (CANDIDA OR CANDIDAS)
           286 ADJ
          9160 ANTARCTICA
             0 CANDIDA ADJ ANTARCTICA
                  (CANDIDA(W)ADJ(W)ANTARCTICA)
          1283 RHIZOMUCOR
L8          115 TRANSESTERIFI? (L) ((CANDIDA ADJ ANTARCTICA) OR RHIZOMUCOR)

=> s l8 and (methyl adj acetate)
       1045346 METHYL
           695 METHYLS
       1045767 METHYL
                  (METHYL OR METHYLS)
        964877 ME
         11059 MES
        971876 ME
                  (ME OR MES)
       1666575 METHYL
                  (METHYL OR ME)
           286 ADJ
        558586 ACETATE
         29563 ACETATES
        570752 ACETATE
                  (ACETATE OR ACETATES)
             0 METHYL ADJ ACETATE
                  (METHYL(W)ADJ(W)ACETATE)
L9           0 L8 AND (METHYL ADJ ACETATE)

=> s l8 and acetate
        558586 ACETATE
         29563 ACETATES
        570752 ACETATE
                  (ACETATE OR ACETATES)
L10         14 L8 AND ACETATE

=> d l10 1-14 ibib abs

L10  ANSWER 1 OF 14  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2007:951899  CAPLUS
```

DOCUMENT NUMBER: 148:166947
TITLE: Lipase-catalyzed irreversible transesterification of vegetable oils for fatty acid methyl esters production with dimethyl carbonate as the acyl acceptor
AUTHOR(S): Su, Er-Zheng; Zhang, Min-Jie; Zhang, Jian-Guo; Gao, Jian-Feng; Wei, Dong-Zhi
CORPORATE SOURCE: State Key Laboratory of Bioreactor Engineering, New World Institute of Biotechnology, East China University of Science and Technology, Shanghai, 200237, Peop. Rep. China
SOURCE: Biochemical Engineering Journal (2007), 36(2), 167-173 CODEN: BEJOFV; ISSN: 1369-703X
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Di-Me carbonate (DMC) was used in the enzymic transesterification of vegetable oils, which resulted in an irreversible reaction benefiting fatty acid Me esters production Among the tested lipases, Novozym435 (lipase B from Candida antarctica) led to a higher conversion for all tested vegetable oils in the initial screening. DMC used as the acyl acceptor, the conversions of cottonseed oil, soybean oil and rapeseed oil were two to three times higher than those of conventional acyl acceptors (methanol and Me acetate). Using cottonseed oil as the feedstock, a very high conversion of 96.4% could attain under the optimized conditions. This optimal condition was further applied to other vegetable oils. All of them showed very high conversion except sesame oil. Although the Novozym435 activity was impaired severely by the bound glycerol, it could remain about 80% activity after five batch reactions if only it was washed with acetone after each batch.
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:814237 CAPLUS
DOCUMENT NUMBER: 146:250385
TITLE: Adverse effect of chloride impurities on lipase-catalyzed transesterifications in ionic liquids
AUTHOR(S): Lee, Sang Hyun; Ha, Sung Ho; Lee, Sun Bok; Koo, Yoon-Mo
CORPORATE SOURCE: Department of Biological Engineering, ERC for Advanced Bioseparation Technology, Inha University, Incheon, 402-751, S. Korea
SOURCE: Biotechnology Letters (2006), 28(17), 1335-1339 CODEN: BILED3; ISSN: 0141-5492
PUBLISHER: Springer
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 146:250385
AB The adverse influence of chloride impurities on the lipase-catalyzed transesterification in ionic liquid is described. The activity of lipase from Rhizomucor miehei exponentially decreased with increasing Cl- content in 1-octyl-3-methylimidazolium bis[(trifluoromethyl)sulfonyl]amide, [Omim][Tf2N], and the activity of lipase in [Omim][Tf2N] mixture containing 2% [Omim][Cl] was only about 2% of the activity in pure [Omim][Tf2N]. The activity of lipase from Candida antarctica linearly decreased at about 5% with every 1% increase in

[Omim][Cl] with there being no activity in [Omim][Tf2N] containing about 20% [Omim][Cl].
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:345019 CAPLUS
DOCUMENT NUMBER: 144:491788
TITLE: Method for producing biodiesel by enzyme-catalyzed transesterification of high-acid-number waste oils
INVENTOR(S): Zong, Minhua; Chen, Zhifeng; Wu, Hong
PATENT ASSIGNEE(S): South China University of Technology, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp. CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1730613	A	20060208	CN 2005-10036639	20050819
PRIORITY APPLN. INFO.:			CN 2005-10036639	20050819

AB The method includes placing C2-6 short-chain aliphatic esters and high-acid number waste oils at a molar ratio of (8-24):3 into a reactor; mixing uniformly; adding (based on oil weight) 5-30% lipase and 5-15% alkaline substance; and reacting on a vibrating bed at 30-60° for 8-48 h, wherein the alkaline substance is selected from triethylamine, potassium carbonate, etc.

L10 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:434196 CAPLUS
DOCUMENT NUMBER: 143:133238
TITLE: Chemoenzymatic synthesis of both enantiomers of 2-chloro-1-(2-furyl)ethanol
AUTHOR(S): Gercek, Zuhal; Karakaya, Devrim; Demir, Ayhan S.
CORPORATE SOURCE: Middle East Technical University, Department of Chemistry, Ankara, 06531, Turk.
SOURCE: Tetrahedron: Asymmetry (2005), 16(10), 1743-1746 CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:133238
AB Enzyme catalyzed transesterification of racemic 2-chloro-1-(2-furyl)ethanol using vinyl acetate afforded the enantiomers of 2-chloro-1-(2-furyl)ethanol and 2-chloro-1-(2-furyl)ethyl acetate in high enantiomeric excess. Lipase from several sources were used for the kinetic resolution of racemic 2-chloro-1-(2-furyl)ethanol, in which the lipase from Pseudomonas cepacia, Candida antarctica and Candida cylindracea displayed high enantioselectivity towards the racemic substrate.
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:361746 CAPLUS

DOCUMENT NUMBER: 139:148694
TITLE: Studies on the optimized lipase-catalyzed biosynthesis of cis-3-hexen-1-yl acetate in n-hexane
AUTHOR(S): Chiang, Wen-Dee; Chang, Shu-Wei; Shieh, Chwen-Jen
CORPORATE SOURCE: Department of Food Science, Yuanpei University of Science and Technology, Hsinchu, 300, Taiwan
SOURCE: Process Biochemistry (Oxford, United Kingdom) (2003), 38(8), 1193-1199
CODEN: PBCHE5; ISSN: 1359-5113
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The aim of this work was to evaluate the ability of immobilized lipase from Rhizomucor miehei (Lipozyme IM-77) to catalyze the transesterification of cis-3-hexen-1-ol with triacetin in n-hexane. Response surface methodol. and a 5-level-5-factor central composite rotatable design were adopted to evaluate the effects of synthesis parameters, such as reaction time (8-24 h), temperature (25-65°), enzyme amount (0.02-0.1 BAUN), substrate molar ratio of triacetin to cis-3-hexen-1-ol (1:1 to 3:1), and added water content (0-20%) on the percentage molar conversion of cis-3-hexen-1-yl acetate. Reaction temperature and substrate molar ratio was the most important parameters and added water content had less effect on percent molar conversion. Based on ridge maximum, maximum transesterification conditions were: reaction time 19.2 h, temperature 48.5°, enzyme amount 0.09 BAUN, substrate molar ratio 2.5:1, and added water 7.85%. The maximum predicted value of molar conversion was 82.1% and the actual exptl. value 80.9% molar conversion.

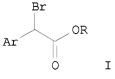
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:191495 CAPLUS
DOCUMENT NUMBER: 138:352978
TITLE: Study on synthesis parameters of lipase-catalyzed hexyl acetate in supercritical CO2 by response surface methodology
AUTHOR(S): Yu, Zer-Ran; Chang, Shu-Wei; Wang, Hao-Yu; Shieh, Chwen-Jen
CORPORATE SOURCE: Department of Food Science, National Chiayi University, Chia-yi, 300, Taiwan
SOURCE: Journal of the American Oil Chemists' Society (2003), 80(2), 139-144
CODEN: JAOCA7; ISSN: 0003-021X
PUBLISHER: AOCS Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The ability of immobilized lipase from Rhizomucor miehei (Lipozyme IM-77) to catalyze the transesterification of hexanol with triacetin in supercrit. carbon dioxide was investigated in this study. Response surface methodol. and a 3-level-3-factor fractional factorial design were adopted to evaluate the effects of synthesis variables, such as reaction time (30 to 90 min), temperature (35 to 55°), and pressure (1500 to 3500 psi), on percent molar conversion of hexyl acetate. The results showed that reaction time and pressure were the most important parameters and temperature had less effect on percent molar conversion. Based on canonical anal., optimal synthesis conditions were

as follows: reaction time 69.0 min, synthesis temperature 46.7°, pressure 2640 psi. The predicted value was 75.6% and the actual value was 77.3% molar conversion.
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:91202 CAPLUS
DOCUMENT NUMBER: 138:401467
TITLE: Lipase-catalyzed enantioselective transesterification toward esters of 2-bromo-tolylacetic acids
AUTHOR(S): Guieysse, David; Salagnad, Christophe; Monsan, Pierre; Remaud-Simeon, Magali
CORPORATE SOURCE: Centre de Bioingenierie Gilbert Durand, Departement de Genie Biochimique et Alimentaire, INSA, UMR INRA 792, UMR CNRS 5504, Toulouse, F-31077, Fr.
SOURCE: Tetrahedron: Asymmetry (2003), 14(3), 317-323
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:401467
GI



I

AB Lipases from Candida antarctica, Pseudomonas cepacia and Rhizomucor miehei were tested in the resolution of seven racemic 2-bromo aryl acetate esters I (Ar = Ph, R = Et; Ar = 2-MeC6H4, 3-MeC6H4, 4-MeC6H4, R = Et, PhCH2). Lipase-catalyzed kinetic resolution via transesterification reaction between the ester and octanol in octane revealed that, of the three enzymes tested, P. cepacia lipase is the most efficient for resolution of the various racemates, with R-enantiopreference. In addition, the position of the Me substituent was found to play a key role in governing the enantioselectivity of the reaction. Using P. cepacia lipase and 2-bromo-m/p-tolyl- or 2-bromophenylacetic acid esters E-values of >50 were measured, whereas with the ortho derivs., E-values dramatically decreased to <6.
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:159915 CAPLUS
DOCUMENT NUMBER: 136:365670
TITLE: 5-[4-(1-Hydroxyethyl)phenyl]-10,15,20-triphenylporphyrin as a Probe of the Transition-State Conformation in Hydrolase-Catalyzed Enantioselective Transesterifications
AUTHOR(S): Ema, Tadashi; Jittani, Masahito; Furuie, Kenji; Utaka, Masanori; Sakai, Takashi

CORPORATE SOURCE: Department of Applied Chemistry, Faculty of Engineering, Okayama University, Tsushima, Okayama, 700-8530, Japan
SOURCE: Journal of Organic Chemistry (2002), 67(7), 2144-2151 CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:365670

AB 5-[4-(1-Hydroxyethyl)phenyl]-10,15,20-triphenylporphyrin (1a) and zinc porphyrin 1b were designed and synthesized to exptl. examine the validity of the transition-state model previously proposed for the lipase-catalyzed kinetic resolution of secondary alcs. The lipases from Pseudomonas cepacia (lipase PS), Candida antarctica (CHIRAZYME L-2), Rhizomucor miehei (CHIRAZYME L-9), and Pseudomonas aeruginosa (lipase LIP) exhibited excellent enantioselectivity (E >100 at 30°). Subtilisin Carlsberg from Bacillus licheniformis (ChiroCLEC-BL) also showed high enantioselectivity for 1a (E = 140 at 30°), and the thermodn. parameters were determined: ΔΔH.dbldag. = -6.8±0.8 kcal mol-1, ΔΔS.dbldag. = -13±3 cal mol-1 K-1. Lipases and subtilisin showed R- and S-preference for 1, resp. The mechanisms underlying the exptl. observations are explained in terms of the transition-state models. The large secondary alc. 1 is a powerful tool for investigating the conformation of the transition state of the enzyme-catalyzed reactions. The fact that 1 was resolved with high enantioselectivity strongly suggests that the gauche conformation, but not the anti conformation, is taken in the transition state, in agreement with the transition-state models involving the stereoelectronic effect.

REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:176918 CAPLUS
DOCUMENT NUMBER: 128:270432
TITLE: Enzymic synthesis of nonracemic inherently chiral calix[4]arenes by lipase-catalyzed transesterification
AUTHOR(S): Browne, Julie K.; Mckervey, M. Anthony; Pitarch, Miguel; Russell, Julie A.; Millership, Jeffrey S.
CORPORATE SOURCE: School of Chemistry, Queen's University, Belfast, BT9 7BL, UK
SOURCE: Tetrahedron Letters (1998), 39(13), 1787-1790 CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 128:270432
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A lipase-catalyzed transesterification of a chiral calix[4]arene (I; R = tert-Bu, H) with vinyl acetate to effect a desymmetrization has been used to produce chiral calix[4]arene monoacetate (II; R = tert-Bu, H) with enantiomer excesses (ee) of up to 100% as well as and diacetate (III;

R = tert-Bu, H). The acetylation of calix[4]arene I (R = H) by vinyl acetate using Candida cylindracea lipase gave 18% racemic monoacetate I (R = tert-butyl) and 18% racemic diacetate III (R = tert-butyl). In further experiment, the effect of cross-linked enzyme crystals (CLECs) was studied. Of various lipase CLECs screened, Mucor miehei and Aspergillus niger lipases were found to catalyze the reaction to give monoacetate I (R = tert-butyl) in 13% yield with enantiomer ratio of 82:18 and in 8% yield with enantiomer ratio of 93:7, resp. Transesterification was repeated with dealkylated trialc. monophenol calix[4]arene I (R = H). : The lipases screened showed remarkable enantioselectivity. A. niger gave 14% monoacetate (-)-II (R = H) with enantiomer ratio of 100:0, while lipase from C. cylindracea showed a very high reversed enantioselectivity of 7:93. Lipase from M. miehei gave a racemic mixture of enantiomers. The results demonstrate the importance of enzymes as a means to effect enantioselective syntheses of large, inherently chiral calix[4]arene and also reveal the very subtle long-range effect of calix[4]arene constitution on the enzyme selectivity. For example, C. cylindracea lipase exhibits no enantioselectivity with p-tert-butylcalixarene derivative I (R = tert-butyl). However when the tert-Bu groups are replaced by hydrogen, the lipase shows a distinct preference for one of the distal prochiral alc. groups.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:655726 CAPLUS
DOCUMENT NUMBER: 127:279814
TITLE: Transesterification of vinyl acetate in organic solvent catalyzed by lipase
AUTHOR(S): Xu, Huijuan; Yang, Lirong; Zhu, Ziqiang
CORPORATE SOURCE: Dep. Chem. Eng., Zhejiang Univ., Hangzhou, 310027, Peop. Rep. China
SOURCE: Huaxue Fanying Gongcheng Yu Gongyi (1997), 13(3), 239-243, 256
CODEN: HFGGEU; ISSN: 1001-7631
PUBLISHER: Zhejiangsheng Chuban Duiwai Maoyi Gongsi
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB Transesterification of vinyl acetate and n-butanol in organic solvent catalyzed by five lipase from different sources was studied sep. The lipase activities of the transesterification in different solvents were examined Solvents with low polarity supported the enzymic reaction better. Among the lipases and solvents tested, Candida sp lipase and n-hexane were chosen for further study. Exptl. observations indicated that the optimum temperature of reaction is 35°, and the rate of reaction decreased as water content in solvents is increased, with the overall product yield 96.7%. The lipase can be reused.

L10 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:280374 CAPLUS
DOCUMENT NUMBER: 126:327326
TITLE: Molecular structure and conformational analysis of chiral alcohols. Application to the enantioselectivity study of lipases
AUTHOR(S): Sainz-Diaz, C. I.; Wohlfahrt, G.; Nogoceke, E.; Hernandez-Laguna, A.; Smeyers, Y. G.; Menge, U.
CORPORATE SOURCE: Instituto Estructura Materia (CSIC), Madrid, 28006,

Spain
SOURCE: THEOCHEM (1997), 390, 225-237
CODEN: THEODJ; ISSN: 0166-1280
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The mol. structures of the chiral compds. 1-phenylethanol, 2-hexanol and 1-phenylethanol acetate have been studied theor. by ab initio methods. Conformational anal. and electronic structure studies have been carried out with these mols. at STO-3G* and 6-31G* basis sets. For the study of the interaction of lipases with substrates, a simplified model of the tetrahedral intermediate has been calculated at the 6-31G*//4-31G* level. Mol. mechanics simulations of the interaction of these compds. with the lipases of Candida rugosa, Pseudomonas cepacia and Rhizomucor miehei have been used to study the enantioselectivity of these lipases in the transesterification reaction of the chiral alcs. The theor. results have been compared with exptl. data and good agreement was observed It can be concluded that the enantioselectivity of these lipases is controlled by the formation of a tetrahedral intermediate, whereas Michaelis complex formation has a much lower significance.
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:207018 CAPLUS
DOCUMENT NUMBER: 124:336957
TITLE: Enrichment of very-long-chain mono-unsaturated fatty acids by lipase-catalyzed hydrolysis and transesterification
AUTHOR(S): Mukherjee, K. D.; Kiewitt, I.
CORPORATE SOURCE: Institut Biochemie Technologie der Fette, BAGKF, Muenster, D-48147, Germany
SOURCE: Applied Microbiology and Biotechnology (1996), 44(5), 557-62
CODEN: AMBIDG; ISSN: 0175-7598
PUBLISHER: Springer
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Partial hydrolysis of triacylglycerols of high-erucic-acid seed oils from white mustard (Sinapis alba), oriental mustard (Brassica juncea) and honesty (Lunaria annua), catalyzed by lipases from Candida cylindracea and Geotrichum candidum, leads to enrichment of erucic acid and other very-long-chain mono-unsatd. fatty acids (VLCMFA) in the acylglycerols (mono-, di- and triacylglycerol) while the C18 fatty acids (oleic, linoleic and linolenic) are enriched in the fatty acid fraction. Partial hydrolysis of the high-erucic-acid triacylglycerols, catalyzed by lipases from porcine pancreas, Chromobacterium viscosum, Rhizopus arrhizus and Rhizomucor miehei yields fatty acids with substantially higher levels of VLCMFA, as compared to the starting material, while the C18 fatty acids are enriched in the acylglycerol fraction. Lipases from Penicillium sp. and Candida antarctica are ineffective for the fractionation of either group of fatty acids. Transesterification of the high-erucic-acid triacylglycerols with Et, Pr or Bu acetate or with n-butanol, catalyzed by the lipase from R. miehei, leads to enrichment of VLCMFA in the alkyl (Et, Pr or butyl) esters, whereas the C18 fatty acids are enriched in the acetylacylglycerols and acylglycerols.

L10 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1993:55087 CAPLUS
DOCUMENT NUMBER: 118:55087
TITLE: A kinetic study of immobilized lipase catalyzing the synthesis of isoamyl acetate by transesterification in n-hexane
AUTHOR(S): Rizzi, M.; Stylos, P.; Riek, A.; Reuss, M.
CORPORATE SOURCE: Inst. Bioverfahrenstech., Univ. Stuttgart, Stuttgart, 7000/1, Germany
SOURCE: Enzyme and Microbial Technology (1992), 14(9), 709-14
CODEN: EMTED2; ISSN: 0141-0229
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Isoamyl acetate was synthesized by lipase-catalyzed transesterification of Et acetate with isoamyl alc. in hexane. The selectivity and rates of ester formation decreased when water content of the immobilized enzyme exceeded 3%. Exptl. observations clearly indicated that the substrates as well as the product (EtOH) act as dead-end inhibitors. A ping-pong bi-bi mechanism with competitive inhibition by substrates and products is proposed that predicts the exptl. observation satisfactorily.

L10 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:566471 CAPLUS
DOCUMENT NUMBER: 117:166471
TITLE: Enzymic transesterification in near-critical carbon dioxide: effect of pressure, Hildebrand solubility parameter and water content
AUTHOR(S): Vermue, M. H.; Tramper, J.; De Jong, J. P. J.; Oostrom, W. H. M.
CORPORATE SOURCE: Food Bioprocess Eng. Group, Wageningen Agric. Univ., Wageningen, Neth.
SOURCE: Enzyme and Microbial Technology (1992), 14(8), 649-55
CODEN: EMTED2; ISSN: 0141-0229
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The transesterification of nonanol and Et acetate into nonyl acetate and ethanol by Mucor miehei lipase was studied in near-critical carbon dioxide. Before studying the enzymic reaction, the homogeneity of the reaction medium was evaluated to make sure that the reaction was executed in homogeneous near-critical carbon dioxide. Estns. of the solubilities of the substrates were made using the difference in Hildebrand solubility parameter between the carbon dioxide and both substrates. A difference smaller than 10 (MPa)0.5, which is needed for solubilization of apolar compds. in supercrit. fluids, also holds for the compds. in this reaction system. The effects of pressure, polarity, and water content of the medium on the enzymic reaction were studied in a continuous stirred-tank reactor. The pressure and polarity of the near-critical carbon dioxide as expressed by the Hildebrand solubility parameter hardly influenced the transesterification rate of the lipase. By increasing the water content in the system from 0.05 to 0.2% (volume/volume), the product formation decreased. The transesterification rate in near-critical carbon dioxide proved to be much lower than in hexane at comparable conditions of temperature, water content, and substrate and enzyme concentration

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     (FILE 'HOME' ENTERED AT 15:39:30 ON 24 MAR 2008)

     FILE '1MOBILITY, 2MOBILITY, ABI-INFORM, CAPLUS, CBNB, CIN, COMPENDEX,
     CONFSCI, DISSABS, DKF, ENCOMPLIT, ENCOMPPAT, ENERGY, GEOREF, IFIPAT,
     INSPEC, INSPHYS, NLDB, NTIS, PASCAL, PROMT, SCISEARCH, TULSA, TULSA2,
     USPATFULL, USPAT2' ENTERED AT 15:39:47 ON 24 MAR 2008
L1          806 S (CARBOXYLIC (W) ACID (W) ESTER) (L) (FAT? OR OIL?) (L) LIPASE
L2            5 S L1 AND BIODIESEL
L3           93 S L1 AND TRANSESTERIFICATION
L4           77 S L3 AND ACETATE
L5           26 S L4 AND CANDIDA

     FILE 'CAPLUS' ENTERED AT 15:51:30 ON 24 MAR 2008
L6            0 S BIODIESEL SAME CANDIDA
L7            0 S BIODIESEL SAME RHIZOMUCOR
L8          115 S TRANSESTERIFI? (L) ((CANDIDA ADJ ANTARCTICA) OR RHIZOMUCOR)
L9            0 S L8 AND (METHYL ADJ ACETATE)
L10          14 S L8 AND ACETATE

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     (FILE 'HOME' ENTERED AT 15:39:30 ON 24 MAR 2008)

     FILE '1MOBILITY, 2MOBILITY, ABI-INFORM, CAPLUS, CBNB, CIN, COMPENDEX,
     CONFSCI, DISSABS, DKF, ENCOMPLIT, ENCOMPPAT, ENERGY, GEOREF, IFIPAT,
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L1          806 S (CARBOXYLIC (W) ACID (W) ESTER) (L) (FAT? OR OIL?) (L) LIPASE
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L9            0 S L8 AND (METHYL ADJ ACETATE)
L10          14 S L8 AND ACETATE

=> s biodiesel (L) lipase (W) catalyzed (L) transesterification
          3909 BIODIESEL
           102 BIODIESELS
          3918 BIODIESEL
                 (BIODIESEL OR BIODIESELS)
         51747 LIPASE
          8983 LIPASES
         53142 LIPASE
                 (LIPASE OR LIPASES)
        258334 CATALYZED
         21430 TRANSESTERIFICATION
           299 TRANSESTERIFICATIONS
         21494 TRANSESTERIFICATION
                 (TRANSESTERIFICATION OR TRANSESTERIFICATIONS)
L11          36 BIODIESEL (L) LIPASE (W) CATALYZED (L) TRANSESTERIFICATION
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=> s l11 and (acetate or formate or butyrate or propionate)
        558586 ACETATE
         29563 ACETATES
        570752 ACETATE
                  (ACETATE OR ACETATES)
         43827 FORMATE
          3618 FORMATES
         45172 FORMATE
                  (FORMATE OR FORMATES)
         28662 BUTYRATE
           982 BUTYRATES
         29194 BUTYRATE
                  (BUTYRATE OR BUTYRATES)
         49834 PROPIONATE
          2052 PROPIONATES
         50897 PROPIONATE
                  (PROPIONATE OR PROPIONATES)
L12           3 L11 AND (ACETATE OR FORMATE OR BUTYRATE OR PROPIONATE)

=> d l12 1-3 ibib abs

L12  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2004:558567  CAPLUS
DOCUMENT NUMBER:          141:313005
TITLE:                    Comparative study on lipase-catalyzed transformation
                          of soybean oil for biodiesel production with different
                          acyl acceptors
AUTHOR(S):                Du, Wei; Xu, Yuanyuan; Liu, Dehua; Zeng, Jing
CORPORATE SOURCE:         Department of Chemical Engineering, Tsinghua
                          University, Beijing, 100084, Peop. Rep. China
SOURCE:                   Journal of Molecular Catalysis B: Enzymatic (2004),
                          30(3-4), 125-129
                          CODEN: JMCEF8; ISSN: 1381-1177
PUBLISHER:                Elsevier Science B.V.
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   Me acetate, a novel acyl acceptor for biodiesel production
     has been developed, and a comparative study on Novozym 435-catalyzed
     transesterification of soybean oil for biodiesel production
     with different acyl acceptors was conducted and reported in this paper.
     Methanol has a serious neg. effect on enzymic activity.  A molar ratio of
     methanol to oil of above 1:1 leads to serious inactivation of the enzyme.
     However, when Me acetate was used as the acyl acceptor, a yield
     of 92% of Me ester could be obtained with a molar ratio of Me
     acetate to oil of 12:1, and Me acetate showed no neg.
     effect on enzymic activity.  Addnl., with crude soybean oil as the oil
     source and methanol as acyl acceptor, a much lower Me ester yield was
     obtained than that with refined soybean oil, while with Me acetate
     as acyl acceptor, an equally high yield of Me ester (92%) was achieved for
     both soybean oils.  Lipase loses its activity very rapidly during repeated
     expts. with methanol as the acyl acceptor, while there is almost no
     detected loss in lipase activity, even after being continuously used for
     100 batches, when Me acetate was used for biodiesel
     production  Moreover, the byproduct triacetin is an important chemical with a
     higher value than glycerol, and this novel acyl acceptor seems very
     promising for lipase-catalyzed large-scale production of
     biodiesel.
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REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:631774 CAPLUS
TITLE: Novozym435-catalyzed transesterification of soybean oil for biodiesel production in solvent-free medium
AUTHOR(S): Du, Wei; Xu, Yuanyuan; Liu, Dehua
CORPORATE SOURCE: Department of Chemical Engineering, Tsinghua University, Beijing, 100084, Peop. Rep. China
SOURCE: Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003), FUEL-020. American Chemical Society: Washington, D. C.
CODEN: 69EKY9
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB Lipase-catalyzed transesterification of renewable oils seems to be very promising in the production of biodiesel and methanol is usually adopted as the acyl acceptor. However, it has been demonstrated that excess methanol as well as byproduct (glycerol) in the reaction system had some neg. effect on the enzymic activity, which could be one of the major bottlenecks for large-scale production of biodiesel. Some other acyl acceptors instead of methanol have been explored in our study and it has been found that Me acetate has the potential to be used as the acyl acceptor for biodiesel production since excess Me acetate in the reaction system showed unobservable harmful effect on the enzymic activity and no glycerol produced in the process. Different lipases were screened and Novozym435 was found to be the most suitable lipase for the transesterification of edible oil with Me acetate as the acyl acceptor. The optimum conditions of the transesterification were as follows: 30% enzyme based on oil weight; oil/methyl acetate molar ratio 1:12; temperature 40-C and reaction time 12h. Under the optimized conditions, maximum Me esters (ME) yield was 90% and it has been found that lipase expressed good stability in this reaction system.

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:630067 CAPLUS
TITLE: Enzymatic transesterification of soybean oil for biodiesel production with different acyl acceptors in a solvent free medium
AUTHOR(S): Xu, Yuanyuan; Du, Wei; Liu, Dehua; Zeng, Jing
CORPORATE SOURCE: Department of Chemical Engineering, Tsinghua University, Beijing, 100084, Peop. Rep. China
SOURCE: Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003), BIOL-202. American Chemical Society: Washington, D. C.
CODEN: 69EKY9
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB Lipase-catalyzed transesterification of renewable oil is very promising for biodiesel production With some short chain alcs. as acyl acceptor, high yield of 95% could be obtained, however, byproduct glycerol was found to have some neg. effect on enzymic activity. Though iso-propanol was effective for glycerol removal during

the repeated use of lipase when short chain alcs. adopted as the acyl acceptor, it is complicated especially for large-scale production Some other acyl acceptors have been explored in this paper and Me acetate seems to be a promising acyl acceptor for biodiesel production since no glycerol produced in the process. Me esters (ME) yield of 92% could be achieved and lipase expressed good stability in the reaction system.

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FILE '1MOBILITY, 2MOBILITY, ABI-INFORM, CAPLUS, CBNB, CIN, COMPENDEX, CONFSCI, DISSABS, DKF, ENCOMPLIT, ENCOMPPAT, ENERGY, GEOREF, IFIPAT, INSPEC, INSPHYS, NLDB, NTIS, PASCAL, PROMT, SCISEARCH, TULSA, TULSA2, USPATFULL, USPAT2' ENTERED AT 15:39:47 ON 24 MAR 2008

L1 806 S (CARBOXYLIC (W) ACID (W) ESTER) (L) (FAT? OR OIL?) (L) LIPASE
L2 5 S L1 AND BIODIESEL
L3 93 S L1 AND TRANSESTERIFICATION
L4 77 S L3 AND ACETATE
L5 26 S L4 AND CANDIDA

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L6 0 S BIODIESEL SAME CANDIDA
L7 0 S BIODIESEL SAME RHIZOMUCOR
L8 115 S TRANSESTERIFI? (L) ((CANDIDA ADJ ANTARCTICA) OR RHIZOMUCOR)
L9 0 S L8 AND (METHYL ADJ ACETATE)
L10 14 S L8 AND ACETATE
L11 36 S BIODIESEL (L) LIPASE (W) CATALYZED (L) TRANSESTERIFICATION
L12 3 S L11 AND (ACETATE OR FORMATE OR BUTYRATE OR PROPIONATE)

=> log off
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y
STN INTERNATIONAL LOGOFF AT 16:22:00 ON 24 MAR 2008